



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Sn

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,381	01/29/2001	Youngjune L. Gwon	10745/9	1183
32605	7590	03/28/2005	EXAMINER	
MACPHERSON KWOK CHEN & HEID LLP 1762 TECHNOLOGY DRIVE, SUITE 226 SAN JOSE, CA 95110			LEVITAN, DMITRY	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/772,381

Applicant(s)

GWON, YOUNGJUNE L.

Examiner

Dmitry Levitan

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Amendment, filed 11/08/2004, has been entered. Claims 1-14 remain pending.

Drawings

1. The drawings were received on 11/08/04. These drawings are approved.
2. In light of Applicant's amendment, the objections to the drawings have been withdrawn.

Specification

3. The amendment filed 11/08/2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: on pages 9 and 10 of the amendment, defining the variables of equations 1, 2 and 5-7.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (examples on pages 4-6). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Claim Rejections - 35 USC § 112

5. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Art Unit: 2662

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claims 1 and 12, how to predict the future location of said mobile node using a network layer data communication protocol;

Regarding claims 2-4, how to predict the future location of mobile node using deterministic, stochastic or adaptive prediction, as equations 1-8 describing these processes lack numerous variables;

Regarding claims 5-6, how to predict the future location of mobile node using a selected variable in the network layer, as equations 1-8 describing these processes lack numerous variables;

6. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use the invention because it does not adequately describe the following:

Regarding claim 13, means for predicting the mobility of said mobile node, means for comparing the mobility with new value, means for taking a desired action;

Regarding claim 14, means for locating a second router, means for pre-registering a new direct route and means for switching the connection to second fixed router.

The specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation.

Claim Rejections - 35 USC § 103

7. Claims 1, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johansson (US 2002/0080752) in view of Chiu (**Predictive schemes for handoff prioritization in cellular networks based on mobile positioning**, Selected Areas in Communications, IEEE Journal on , Volume: 18 , Issue: 3 , March 2000 Pages: 510 - 522).

8. Regarding claim 1, Johansson substantially teaches the limitations of the claim:

A method of communicating in a wireless, mobile access digital data network having plurality of agents /routers for interfacing mobile nodes with the data network (Fig. 3a and 0035-0036), comprising:

Establishing a communication link between said mobile node (mobile node 3 on Fig. 3a and 3b, 0077) and said network via a first router/agent (agent 2a on Fig. 3b);

Establishing a communication link between correspondent node (correspondent node 4a on Fig. 3b) and said network via second router/agent (home agent 1 on Fig. 3b);

Establishing data communication between the mobile node and the correspondence node via a first data route including said first and second routers/agents (mobile IP tunnel 30a on Fig. 3a and 0074);

Establishing a second data route for data communications between said mobile node and said correspondence node including said second and third routers/agents (agents 1 and 2b on Fig. 3b and 0077);

Transferring said communication link between said mobile node and said network from first router to the third router (communicating between correspondent node 4a and mobile node 3 through IP tunnel 30b on Fig. 3b and 0077); and

Johansson does not teach predicting the future location of mobile node and determining based on the prediction when the communication link should be transferred from first router to the third router using a network layer data communication protocol.

Chiu teaches predicting the future location of mobile node (III. Predictive channel reservation on page 512) and determining based on the prediction when the communication link should be transferred from first router to the third router (Handoff from current cell to next cell on page 510).

Admitted prior art teaches using a network layer data communication protocol for predicting the future location of said mobile unit (Neighbor Discovery methodology specified in IETF RFC 2461 identifying available local routers, Application pages 13 and 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add predicting the future location of mobile node and determining based on the prediction when the communication link should be transferred from first router to the third router of Chiu and using a network layer data communication protocol for predicting the future location of said mobile unit to the system of Johansson to improve the system end-to-end packet latency and utilize a popular standard.

Regarding claims 7 and 8, Johansson teaches data communication as real time interactive multimedia communication including voice over IP (streaming video and voice over IP calls 0124).

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johansson and Chiu in view of admitted prior art.

Johansson and Chiu substantially teach all the limitations of the parent claim 1.

Johansson and Chiu do not teach using IMT-2000, Mobile IP version 4 and 6 standards.

Admitted prior art (current application page 5 lines 2-28) teaches using IMT-2000, Mobile IP version 4 and 6 standards in third generation data networks.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use IMT-2000, Mobile IP version 4 and 6 standards of admitted prior art in the system of Johansson and Chiu to improve the system compatibility with network equipment utilizing popular standards.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu in view of Johansson.

Chiu substantially teaches the limitations of claim:

In a wireless (cellular system, page 510) system, predicting a mobility of the mobile node relative to a first fixed agent (prediction of the motion of MS on page 512);

Comparing said predicted mobility parameter value to a predetermined threshold value (threshold distance on page 516);

If said predicted mobility value meets or exceeds said threshold value, locating a second agent (starting handoff to next cell Fig. 1 and page 512);

Pre-registering said mobile node with second agent (sending a reservation request to a new BS on page 512);

Art Unit: 2662

Pre-establishing a new network data route between said mobile node and said correspondent node via second fixed agent (completing the handoff process to a new BS).

Chiu does not teach routers/agents for interfacing the mobile nodes to the core network, using a network layer communication protocol and switching the mobile node connection from one fixed agent to the other.

Johansson teaches routers/agents for interfacing the mobile nodes to the core network (agents 1 and 2 on Fig. 3b) and switching the mobile node connection from one fixed agent to the other (mobile IP tunnel 30b on Fig. 3b).

Admitted prior art teaches using a network layer data communication protocol for predicting the future location of said mobile unit (Neighbor Discovery methodology specified in IETF RFC 2461 identifying available local routers, Application pages 13 and 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add routers/agents for interfacing the mobile nodes to the core network, using a network layer data communication protocol for predicting the future location of said mobile unit and switching the mobile node connection from one fixed agent to the other of Johansson to the system of Chiu to use Internet as a core network in the system and utilize a popular standard.

10. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu and Johansson.

Chiu and Johansson substantially teach the limitations of claims 13 and 14, as shown in claim 12 rejection above.

Chiu and Johansson do not teach making a device utilizing the disclosed method.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a device utilizing the disclosed method of Chiu and Johansson to implement the system.

Response to Arguments

11. Applicant's arguments filed 11/08/04 have been fully considered but they are not persuasive.

12. On pages 17 and 18 of the Response, Applicant argues that claims 13 and 14 are supported by the Specification on pages 20-24.

Examiner respectfully disagrees.

The cited portion of disclosure does not contain any structure or operation details of the claimed "means", as it discloses the method without describing the means as claimed in 13 and 14.

13. On page 20 of the Response, Applicant argues that Johansson and Chiu do not teach using network layer data communication protocol.

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the network traffic conditions, examiner believes that this argument is irrelevant as the network traffic conditions were not directly claimed.

14. Note. Regarding the disclosure objection, because it contains an embedded hyperlink and/or other form of browser-executable code, Applicant is advised to submit the referenced documents as IDS.


Art Unit: 2662

Examiner therefore believes that the cited references meet all the claims limitations and the rejection is proper.

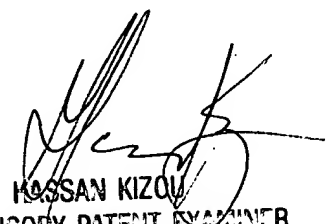
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dmitry Levitan
Patent Examiner.
03/08/05



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600